[0608] 13.4 Charging Number Based Billing for Mobile Conference

[0609] The following call flow describes Option2, namely the charging number based billing solution for a mobile conference, which is applicable to (real-time) billing subscribers. Specifically, in this example, Subscriber A is a prepaid subscriber and Subscriber A initiates a conference call to B, C, and D.

[0610] **1**. Subscriber A selects B, C and D and initiates the conference call. The client on the handset **120** of Subscriber A establishes a call to the number for the RTX **102**.

[0611] **2**. The originating MSC **104** routes the call towards the RTX **102**. Before routing the call to the RTX **102**, the MSC **104** identifies Subscriber A as a billing subscriber and puts a prefix [111] to the number f the TX **102**.

[0612] **3**. The client on the handset **120** forms an SMS with the numbers for B, C and D, and sends the SMS to the RTX **102** via the GMSC **104**.

[0613] **4**. The RTX **102** receives the SMS, and initiates the terminating legs towards B, C and D. The RTX **102** identifies Subscriber A as a billing subscriber based on the prefix [111] of the number received in the incoming IAM. While dialing the terminating legs, the RTX **102** enters the "Charging Number" in the IAM as the number of Subscriber A:

[0614] Leg**1** from RTX **102** to GMSC **104** is IAM (Calling=A, Called=B, Charging Number=A),

[0615] Leg**2** from RTX **102** to GMSC **104** is IAM (Calling=A, Called=C, Charging Number=A), and

[0616] Leg**3** from RTX **102** to GMSC **104** is IAM (Calling=A, Called=D, Charging Number=A).

[0617] **5**. The GMSC **104** analyzes the charging number field in the IAM and, since the Charging Number [A] is a billing subscriber, the GMSC **104** initiates an "IN-Session" with the billing server for Subscriber A. The GMSC **104** repeats this for all the legs and, as a result, Subscriber A is billed for all of the terminating legs simultaneously.

[0618] 13.5 Charging Number Based Billing for PTT

[0619] The following call flow describes Option2, namely the charging number based billing solution for a PTT, which is applicable to (real-time) billing subscribers. Specifically, in this example, Subscriber A is a prepaid subscriber and Subscriber A initiates a PTT call to B, C, and D.

[0620] **1**. Subscriber A selects B, C and D, and initiates the PTT call. The client on the handset **120** for Subscriber A establishes a call to: RD+CallType+GroupIndex. [RD=4-digits, Call Type=2-digits, GroupIndex=2 digits].

[0621] **2**. In the originating call setup, the following steps are performed:

[0622] a. The serving MSC **104** initiates an InitialDP [DP**2** based on Routing Delimiter] with dialed digits as [RoutingDelimeter+TypeofCall+GroupIndex] towards the RTX **102**.

[0623] b. The RTX **102** sends a connect message back to the originating MSC **104** with the number of the RTX **102**.

[0624] c. The originating MSC **104** sends the IAM towards the RTX **102**.

[0625] **3**. This call reaches the serving MSC **104** and the serving MSC **104** does a "B-Party" analysis and routes the call to the RTX **102**.

[0626] **4**. The RTX **102** receives the dial digits in the received IAM, and initiates the terminating legs towards B, C and D. While dialing the terminating legs, the RTX **102** determines whether Subscriber A is a billing subscriber and fills the "Charging Number" in the IAM:

[0627] a. Leg**1** from the RTX **102** to the GMSC **104** is IAM (Calling=A+33, Called=B, Charging Number=A),

[0628] b. Leg**2** from the RTX **102** to the GMSC **104** is IAM (Calling=A+33, Called=C, Charging Number=A), and

[0629] c. Leg**3** from the RTX **102** to the GMSC **104** is IAM (Calling=A+33, Called=D, Charging Number=A).

[0630] **5**. The GMSC **104** analyzes the charging number field in the IAM and, since the Charging Number [A] is a billing subscriber, the GMSC **104** initiates an "IN-Session" with the billing server for Subscriber A. The GMSC **104** repeats this for all the terminating legs and, as a result, Subscriber A is billed for all the terminating legs simultaneously.

14 Conclusion

[0631] The foregoing description of the preferred embodiment of the invention has been presented for the purposes of illustration and description. It is not intended to be exhaustive or to limit the invention to the precise form disclosed. Many modifications and variations are possible in light of the above teaching. It is intended that the scope of the invention be limited not with this detailed description, but rather by the claims appended hereto.

What is claimed is:

1. An apparatus for providing advanced voice services in a mobile phone network, comprising:

a mobile phone network for making calls between mobile phones, wherein the calls are initiated by call setup and in-band signaling within the mobile phone network and voice frames for the calls are switched between the mobile phones by at least one mobile switching center across bearer paths in the mobile phone network; and

a real-time exchange that interfaces to at least one mobile switching center in the mobile phone network to provide the advanced voice services therein, the advanced voice services including a Scheduled Conference service, wherein an originator mobile phone can schedule a conference call with a group of other participant mobile phones at a predetermined date and time;

both the real-time exchange and the mobile phones that use the Scheduled Conference service communicate with each other using the call setup and in-band signaling within the mobile phone network, and the real-time exchange switches the voice frames for the conference call between the mobile phones across the bearer paths and through at least one mobile switching center in the mobile phone network.

2. The apparatus of claim **1**, wherein the Scheduled Conference service includes a Dial-Out mode of operation where the real-time exchange dials out the call to the mobile phones and bridges the conference call between the mobile phones.

3. The apparatus of claim **1**, wherein the Scheduled Conference service includes a Dial-In mode of operation where the mobile phones dial in to a conference bridge number and the real-time exchange bridges the conference call between the mobile phones.

4. The apparatus of claim **1**, wherein the real-time exchange sends a message to each participant and originator with the conference call's details.

5. The apparatus of claim **4**, wherein the message includes a conference bridge number.